

## **ABSTRACT**

A ultra-thin flexible durable radio frequency plastic of other substrate identification device, such as cards, tags, badges, bracelets and labels including at least one electronic element embedded therein and a hot or cold lamination process for the manufacture of radio frequency identification devices including a micro IC chip embedded therein. The process results in a device having an overall thickness in the range of 0.005 inches to 0.033 inches with a surface suitable for receiving dye sublimation printing—the variation in the device thickness across the surface is less than 0.0005 inches. The hot lamination process of the present invention results in an aesthetically pleasing device which can be used as a sticker when adhesive is applied to the device. The invention also relates to a plastic device in all shapes and sizes formed in accordance with the hot lamination process of the present invention and can withstand harsh chemicals and various pressures.